FIG.1

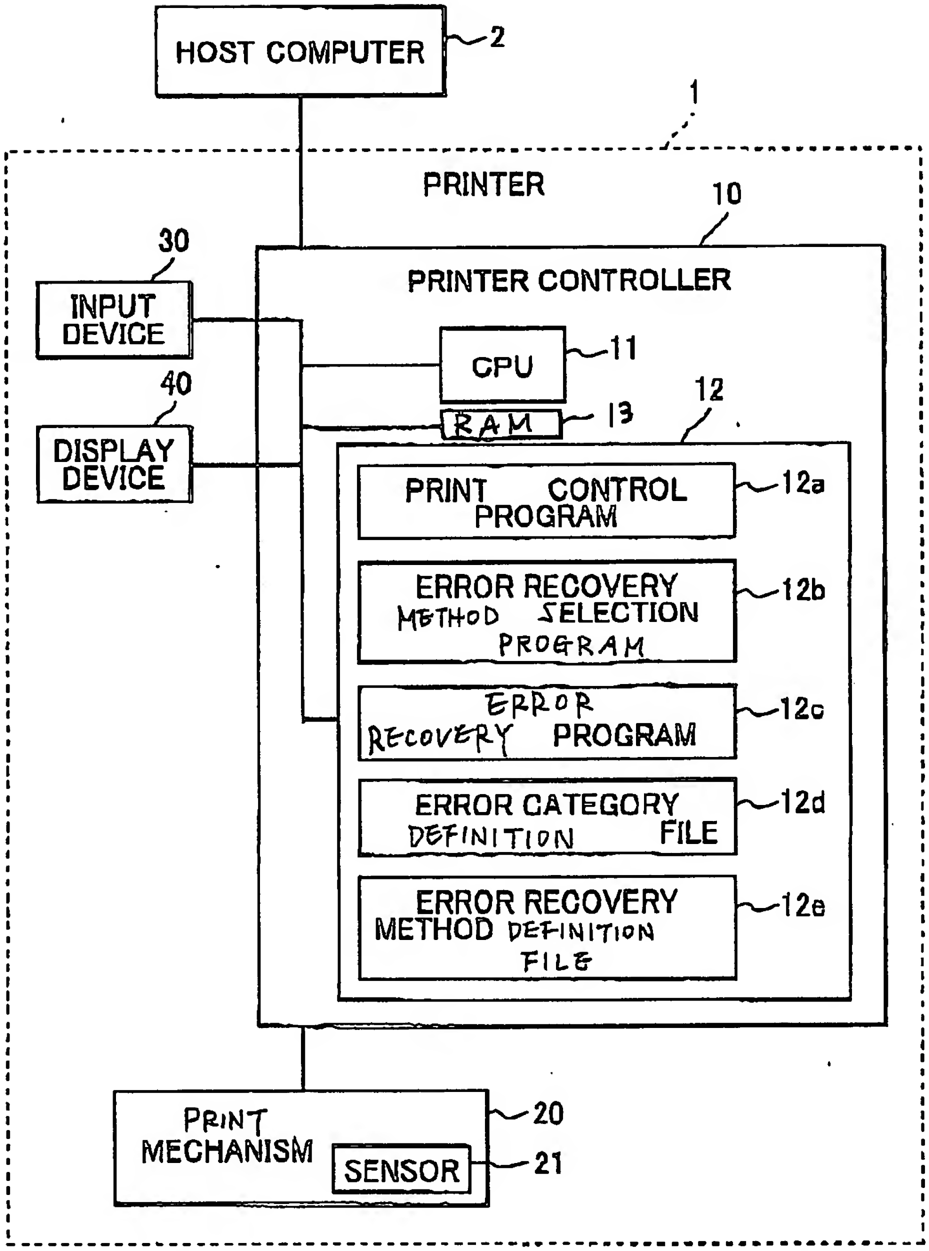
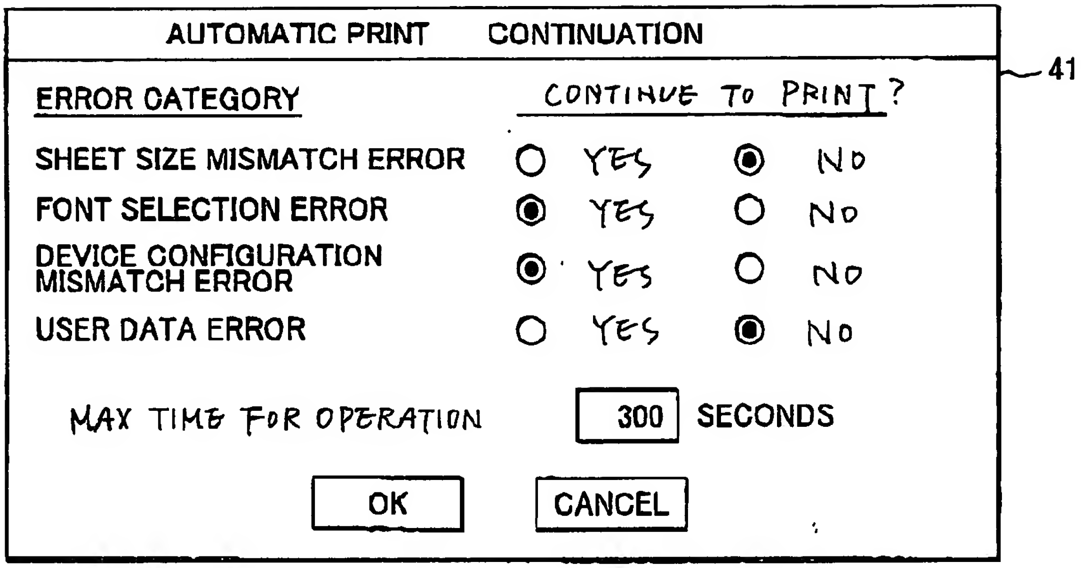

HOST COMPUTER
2
1
PRINTER
10
PRINTER CONTROLLER
30
INPUT DEVICE
40
DISPLAY DEVICE
CPU
11
RAM
13
12
PRINT CONTROL PROGRAM
12a
ERROR RECOVERY METHOD SELECTION PROGRAM
12b
ERROR RECOVERY PROGRAM
12c
ERROR CATEGORY DEFINITION FILE
12d
ERROR RECOVERY METHOD DEFINITION FILE
12e
PRINT MECHANISM
20
SENSOR
21

FIG.2


AUTOMATIC PRINT CONTINUATION

ERROR CATEGORY — CONTINUE TO PRINT?

SHEET SIZE MISMATCH ERROR ○ YES ● NO

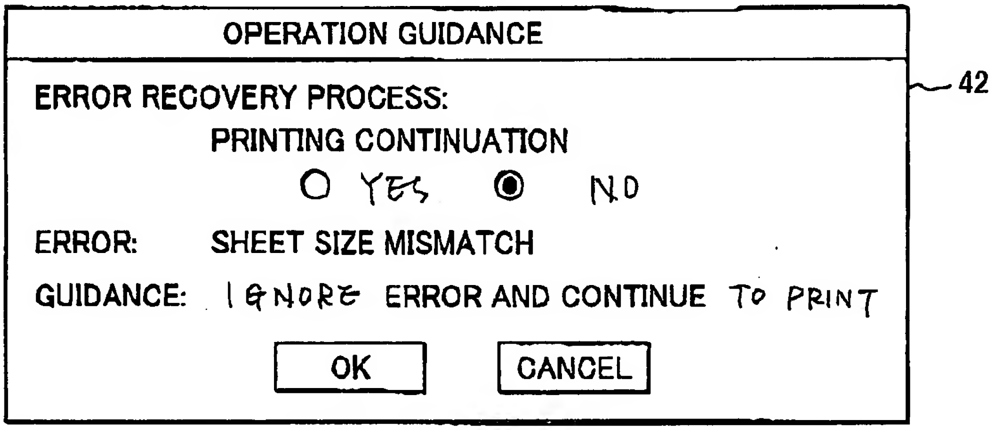
FONT SELECTION ERROR ● YES ○ NO

DEVICE CONFIGURATION MISMATCH ERROR ● YES ○ NO

USER DATA ERROR ○ YES ● NO

MAX TIME FOR OPERATION 300 SECONDS

FIG.3


OPERATION GUIDANCE

ERROR RECOVERY PROCESS:
PRINTING CONTINUATION
○ YES ● NO

ERROR: SHEET SIZE MISMATCH

GUIDANCE: IGNORE ERROR AND CONTINUE TO PRINT

FIG.4

CLASSIFICATION CODE OF ERROR	DETAIL CODE OF ERROR
0x10	0x100001
0x10	0x100002
0x10	0x100003
0x10	0x100004
:	:
0x20	0x100001
0x20	0x100002
:	:
0xMM	0xNNNNNN

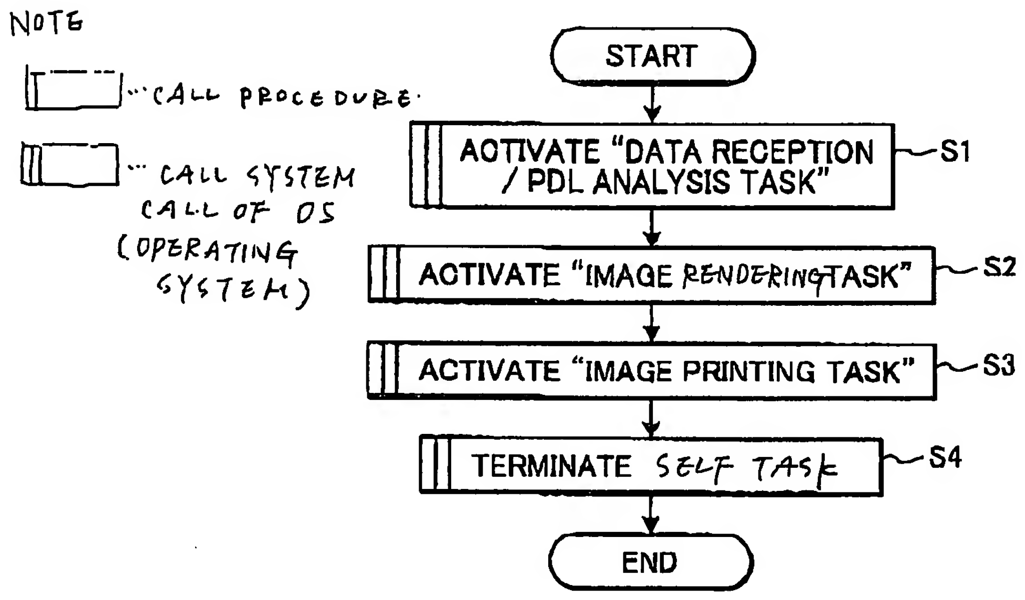
FIG.5

CLASSIFICATION CODE OF ERRORS	DETAIL CODE OF ERRORS
0x10: SHEET SIZE MISMATCH ERROR	0x10 0001: SHEET SIZE IS SMALLER THAN SPECIFIED 0x10 0002: SHEET SIZE IS LARGER THAN SPECIFIED
0x20: FONT SELECTION ERROR	0x20 0001: NO FONT FOR SPECIFIED "TYPEFACE." ATTRIBUTE 0x20 0002: NO FONT FOR SPECIFIED "SYMBOL SET." ATTRIBUTE 0x20 0003: NO FONT FOR SPECIFIED "STYLE." ATTRIBUTE 0x20 0004: NO FONT FOR SPECIFIED "SPACING." ATTRIBUTE 0x20 0005: SPECIFIED CHARACTER PITCH IS OUT OF RANGE 0x20 0006: SPECIFIED POINT SIZE OUT OF RANGE 0x20 0007: SPECIFIED STROKE WEIGHT OUT OF RANGE
0x30: DEVICE CONFIGURATION MISMATCH ERROR	0x30 0001: DUPLEX DATA SPECIFIED FOR SIMPLEX PRINTER. 0x30 0002: SPECIFIED INPUT TRAY.NOT FOUND 0x30 0003: SPECIFIED OUTPUT STACKER (BIN).NOT FOUND
0x40: USER DATA ERROR	0x40 0001: SPECIFIED PDL NOT FOUND 0x40 0002: INVALID COMMAND IN PDL 0x40 0003: UNDEDINED COMMAND IN PDL 0x40 0004: INVALID DATAFORMAT OF DOWNLOADED FONT 0x40 0005: SPECIFIED DOWNLOADED FONT NOT FOUND 0x40 0006: MEMORY CAPACITY NOT SUFFICIENT IN READING DOWNLOADED FONT 0x40 0007: MEMORY CAPACITY NOT SUFFICIENT IN WRITING DOWNLOADED FONT 0x40 0008: READ ERROR FOR DOWNLOADED FONT. 0x40 0009: WRITE ERROR FOR DOWNLOADED FONT. 0x40 000A: DOWNLOADED OVERLAY DATA FORMAT IS INVALID. 0x40 000B: SPECIFIED OVERLAY DATA FILE NOT FOUND 0x40 000C: MEMORY CAPACITY NOT SUFFICIENT FOR DOWNLOADED OVERLAY DATA IN READING 0x40 000D: READERROR FOR DOWNLOADED OVERLAY DATA 0x40 000E: WRITE ERROR FOR DOWNLOADED OVERLAY DATA

FIG.6

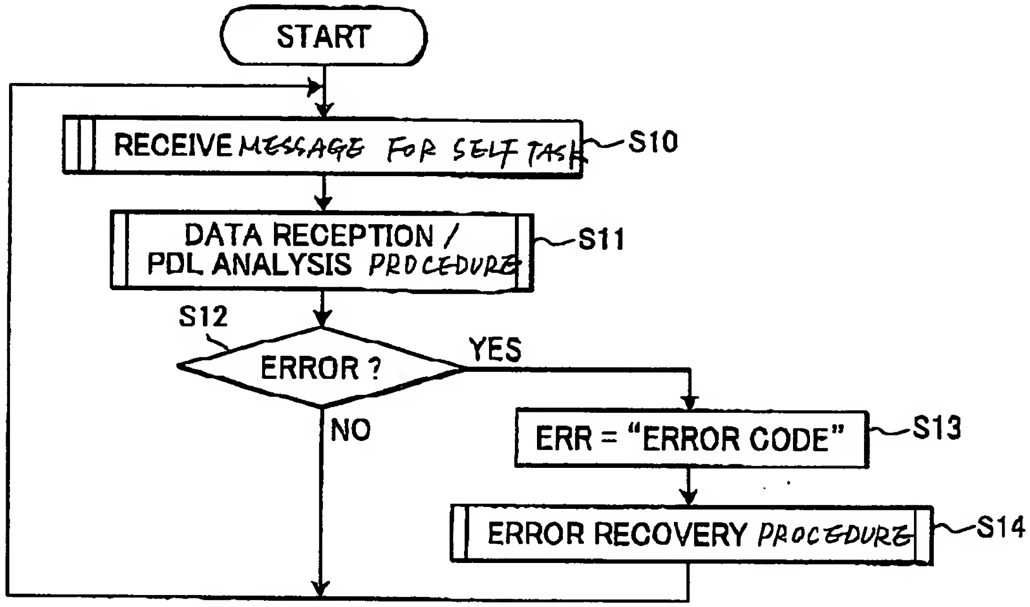
ERROR CATEGORY	ERROR RECOVERY METHOD
0x10: SHEET SIZE MISMATCH ERROR	0x00: RECOVERY BY USER OPERATION
0x20: FONT SELECTION ERROR	0x01: AUTOMATIC CONTINUATION
0x30: DEVICE CONFIGURATION MISMATCH ERROR	0x01: AUTOMATIC CONTINUATION
0x40: USER DATA ERROR	0x00: RECOVERY BY USER OPERATION

FIG.7


NOTE
··· CALL PROCEDURE
··· CALL SYSTEM CALL OF OS (OPERATING SYSTEM)
START
ACTIVATE "DATA RECEPTION / PDL ANALYSIS TASK"
S1
ACTIVATE "IMAGE RENDERING TASK"
S2
ACTIVATE "IMAGE PRINTING TASK"
S3
TERMINATE SELF TASK
S4
END

PRINT. CONTROL PROGRAM

FIG.8


START
RECEIVE MESSAGE FOR SELF TASK
S10
DATA RECEPTION / PDL ANALYSIS PROCEDURE
S11
S12
ERROR ?
YES
NO
ERR = "ERROR CODE"
S13
ERROR RECOVERY PROCEDURE
S14

DATA RECEPTION / PDL ANALYSIS TASK

FIG.9

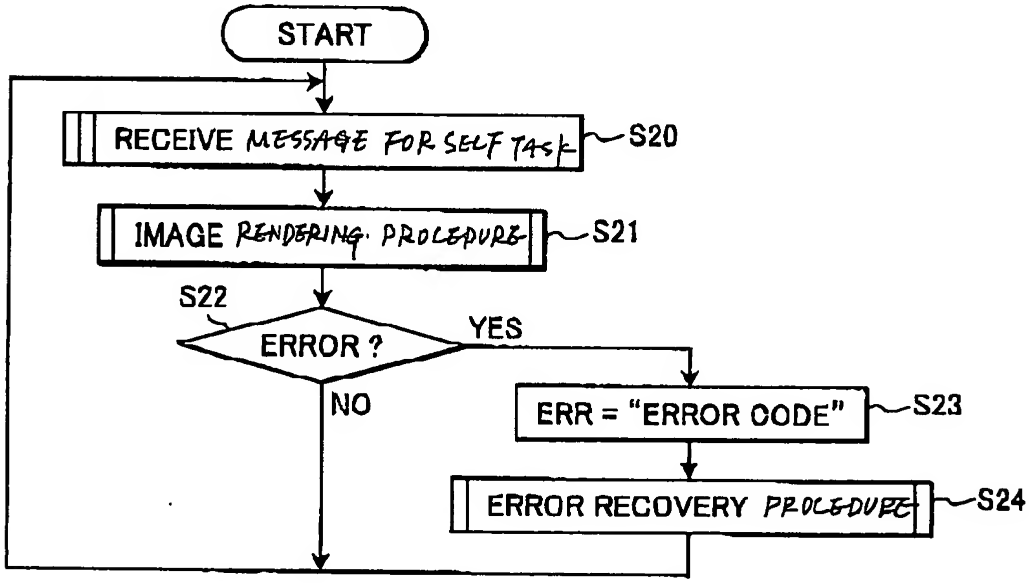

START
RECEIVE MESSAGE FOR SELF TASK
S20
IMAGE RENDERING PROCEDURE
S21
S22
ERROR ?
YES
NO
ERR = "ERROR CODE"
S23
ERROR RECOVERY PROCEDURE
S24

IMAGE RENDERING TASK

FIG.10

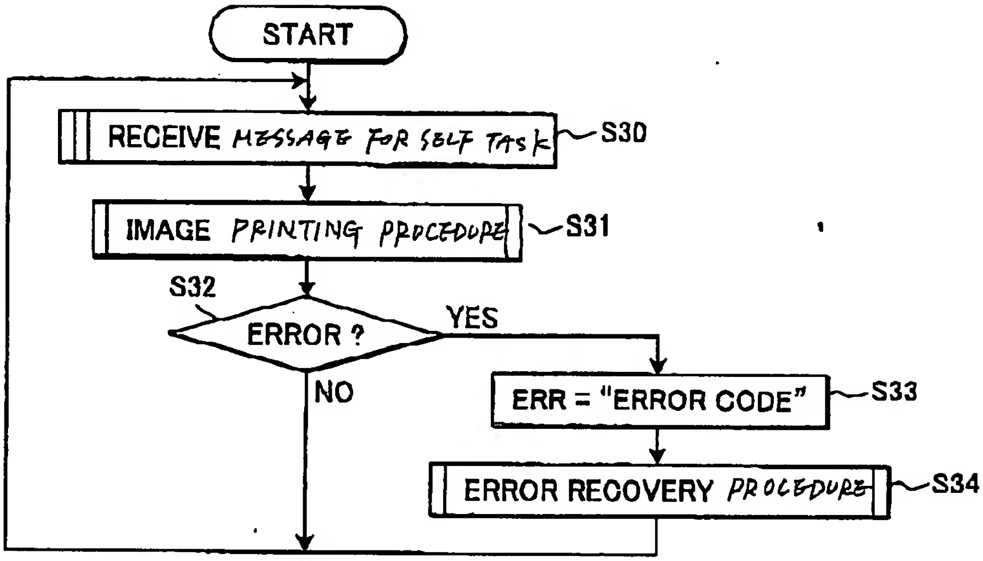
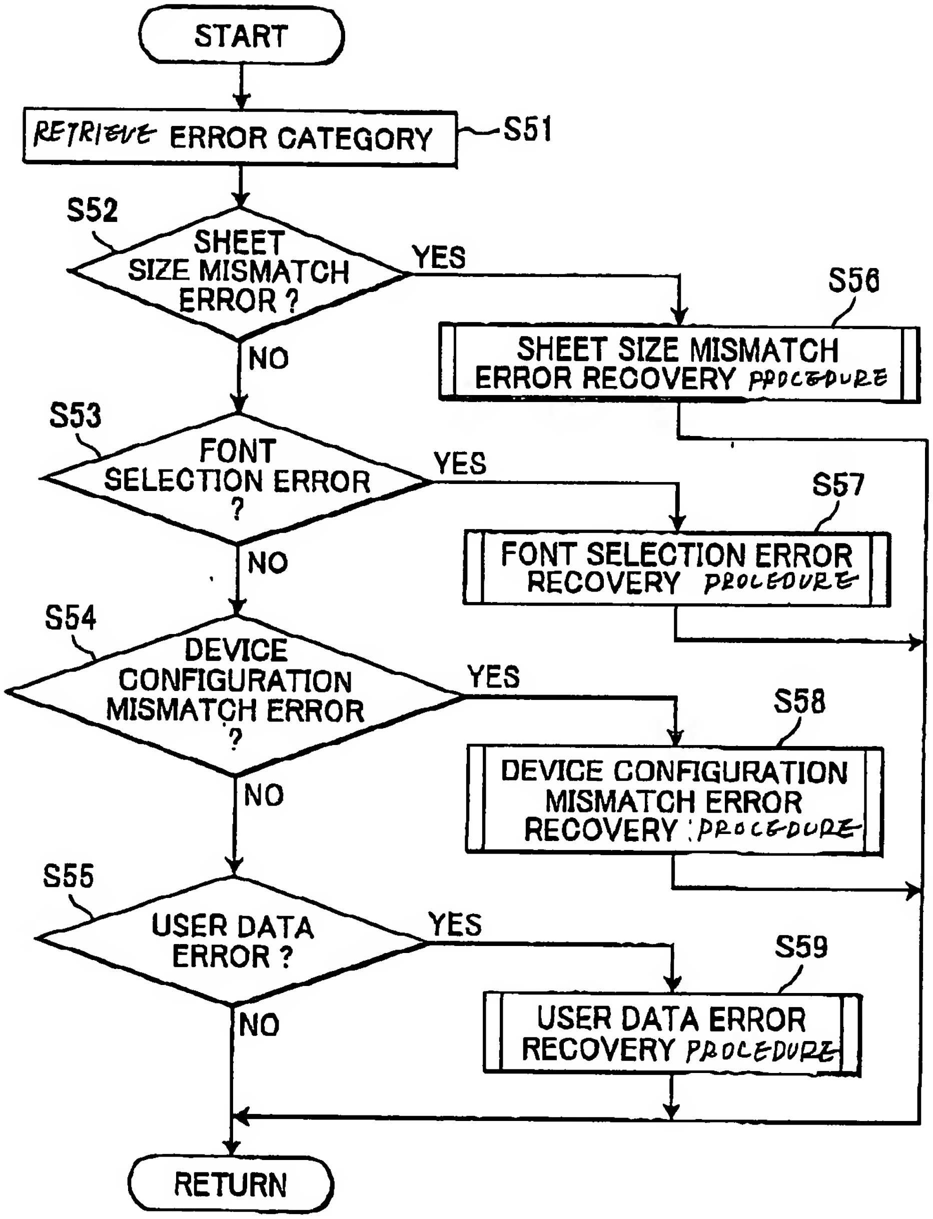

START
RECEIVE MESSAGE FOR SELF TASK
S30
IMAGE PRINTING PROCEDURE
S31
S32
ERROR ?
YES
NO
ERR = "ERROR CODE"
S33
ERROR RECOVERY PROCEDURE
S34

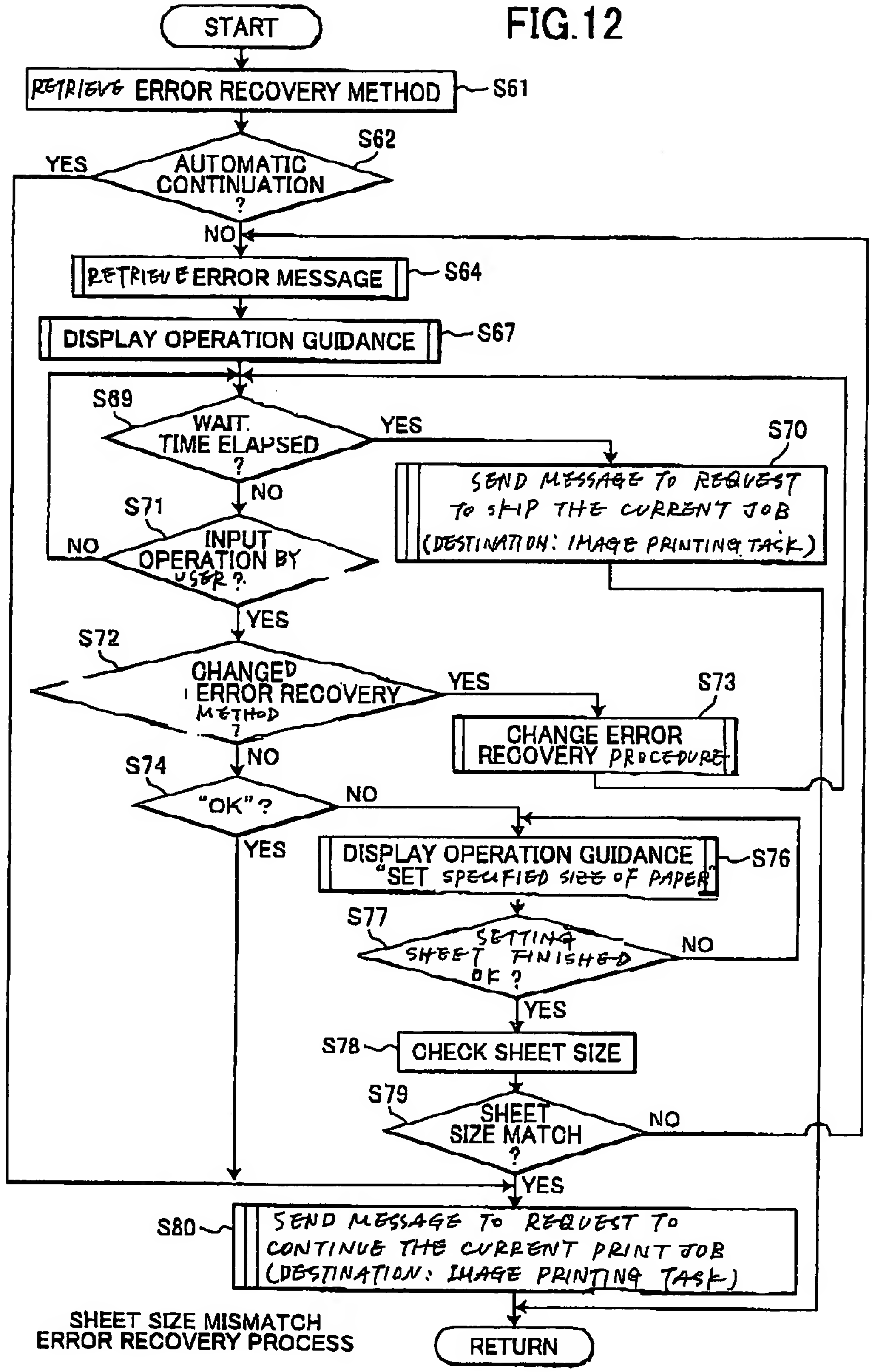
IMAGE PRINTING TASK

FIG.11


START
RETRIEVE ERROR CATEGORY
S51
S52
SHEET SIZE MISMATCH ERROR ?
YES
NO
S56
SHEET SIZE MISMATCH ERROR RECOVERY PROCEDURE
S53
FONT SELECTION ERROR ?
YES
NO
S57
FONT SELECTION ERROR RECOVERY PROCEDURE
S54
DEVICE CONFIGURATION MISMATCH ERROR ?
YES
NO
S58
DEVICE CONFIGURATION MISMATCH ERROR RECOVERY PROCEDURE
S55
USER DATA ERROR ?
YES
NO
S59
USER DATA ERROR RECOVERY PROCEDURE
RETURN

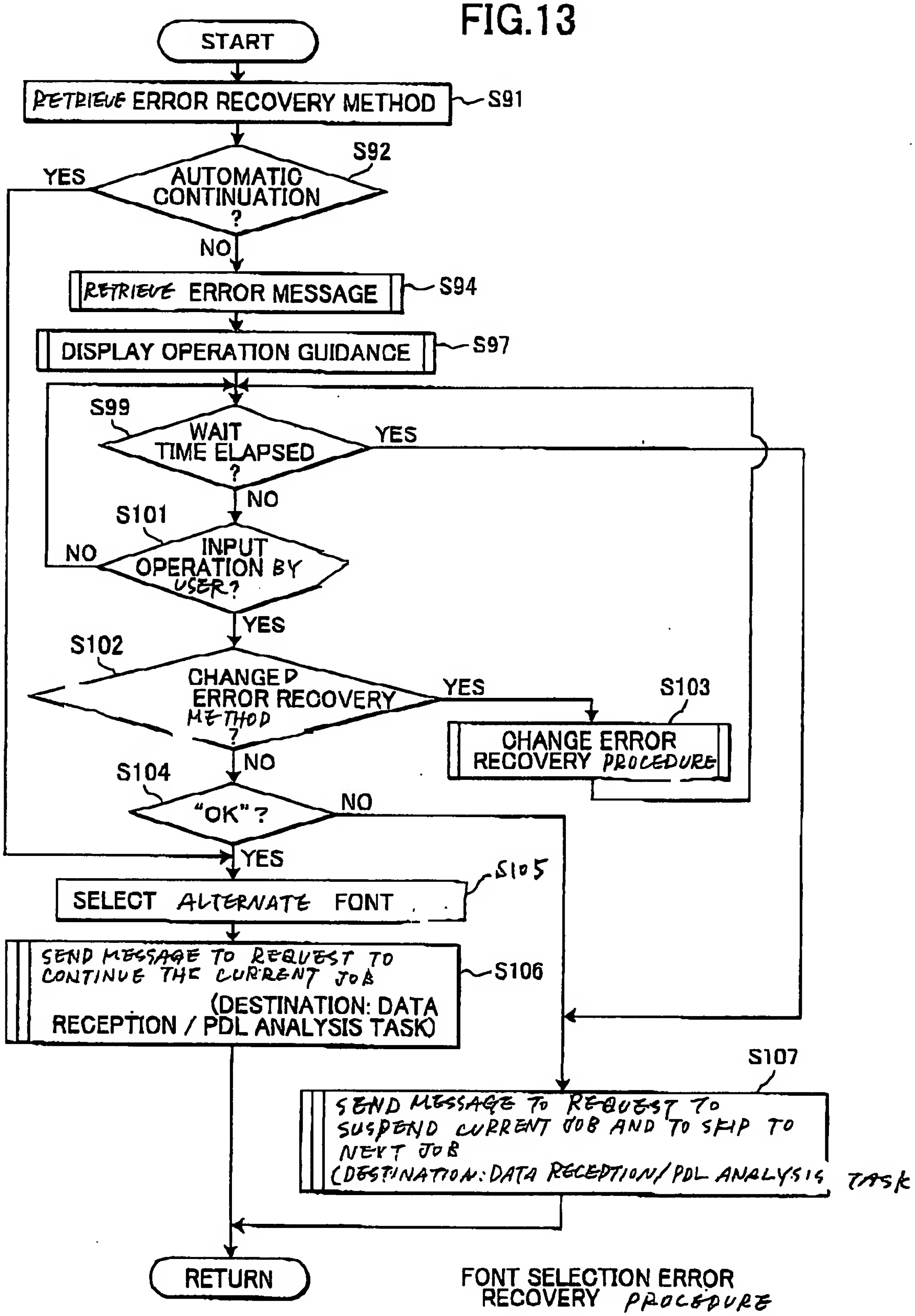
ERROR RECOVERY PROCEDURE

FIG.12


START
RETRIEVE ERROR RECOVERY METHOD
S61
S62
AUTOMATIC CONTINUATION ?
YES
NO
RETRIEVE ERROR MESSAGE
S64
DISPLAY OPERATION GUIDANCE
S67
S69
WAIT TIME ELAPSED ?
YES
S70
SEND MESSAGE TO REQUEST TO SKIP THE CURRENT JOB (DESTINATION: IMAGE PRINTING TASK)
NO
S71
INPUT OPERATION BY USER ?
NO
YES
S72
CHANGED ERROR RECOVERY METHOD ?
YES
S73
CHANGE ERROR RECOVERY PROCEDURE
NO
S74
"OK" ?
NO
YES
DISPLAY OPERATION GUIDANCE "SET SPECIFIED SIZE OF PAPER"
S76
S77
SETTING SHEET FINISHED OK ?
NO
YES
S78
CHECK SHEET SIZE
S79
SHEET SIZE MATCH ?
NO
YES
S80
SEND MESSAGE TO REQUEST TO CONTINUE THE CURRENT PRINT JOB (DESTINATION: IMAGE PRINTING TASK)
RETURN

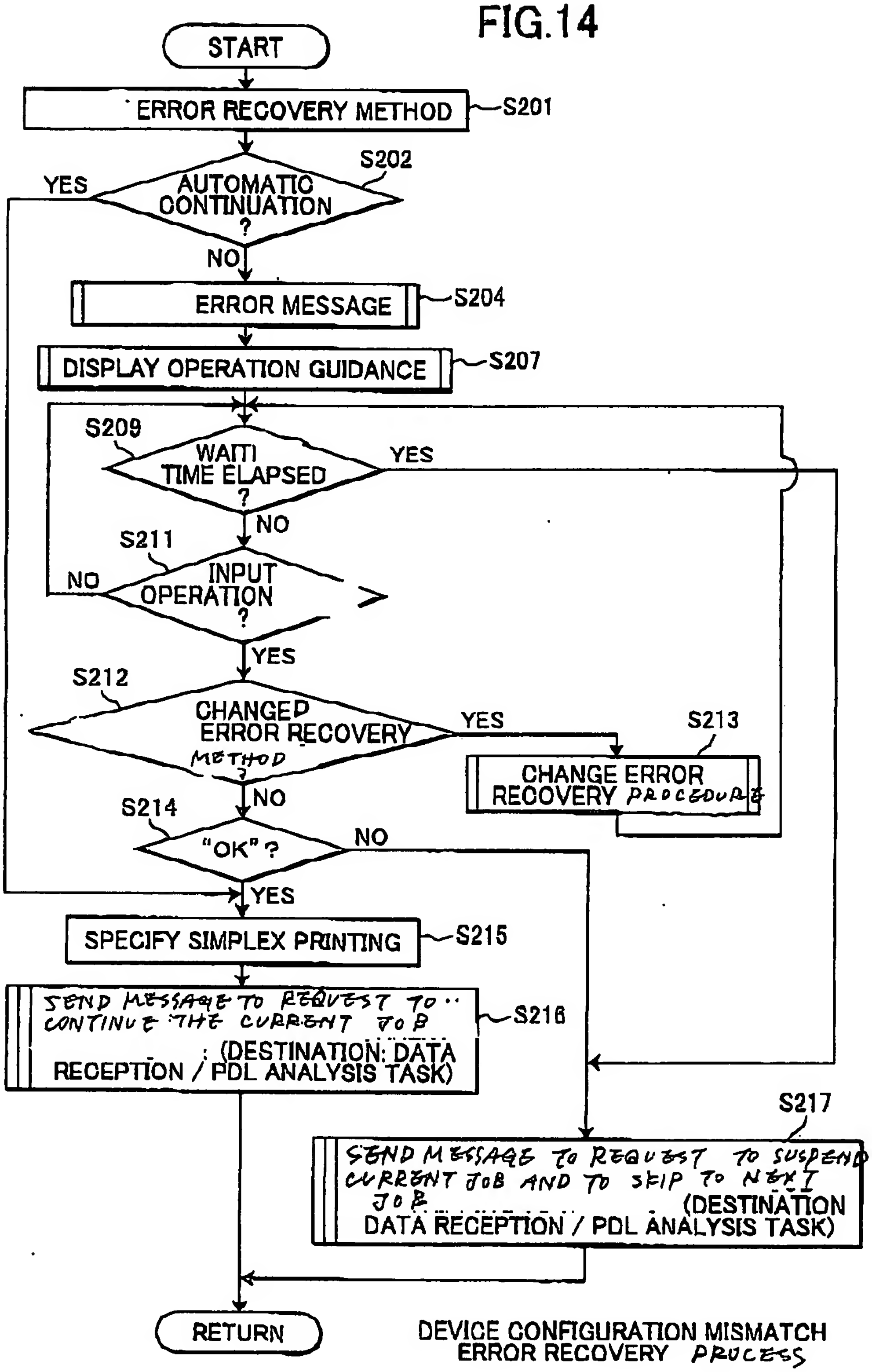
SHEET SIZE MISMATCH ERROR RECOVERY PROCESS

FIG.13


START
RETRIEVE ERROR RECOVERY METHOD
S91
S92
AUTOMATIC CONTINUATION ?
YES
NO
RETRIEVE ERROR MESSAGE
S94
DISPLAY OPERATION GUIDANCE
S97
S99
WAIT TIME ELAPSED ?
YES
NO
S101
INPUT OPERATION BY USER?
NO
YES
S102
CHANGED ERROR RECOVERY METHOD ?
YES
S103
CHANGE ERROR RECOVERY PROCEDURE
NO
S104
"OK"?
NO
YES
S105
SELECT ALTERNATE FONT
SEND MESSAGE TO REQUEST TO CONTINUE THE CURRENT JOB (DESTINATION: DATA RECEPTION / PDL ANALYSIS TASK)
S106
S107
SEND MESSAGE TO REQUEST TO SUSPEND CURRENT JOB AND TO SKIP TO NEXT JOB (DESTINATION: DATA RECEPTION/PDL ANALYSIS TASK
RETURN

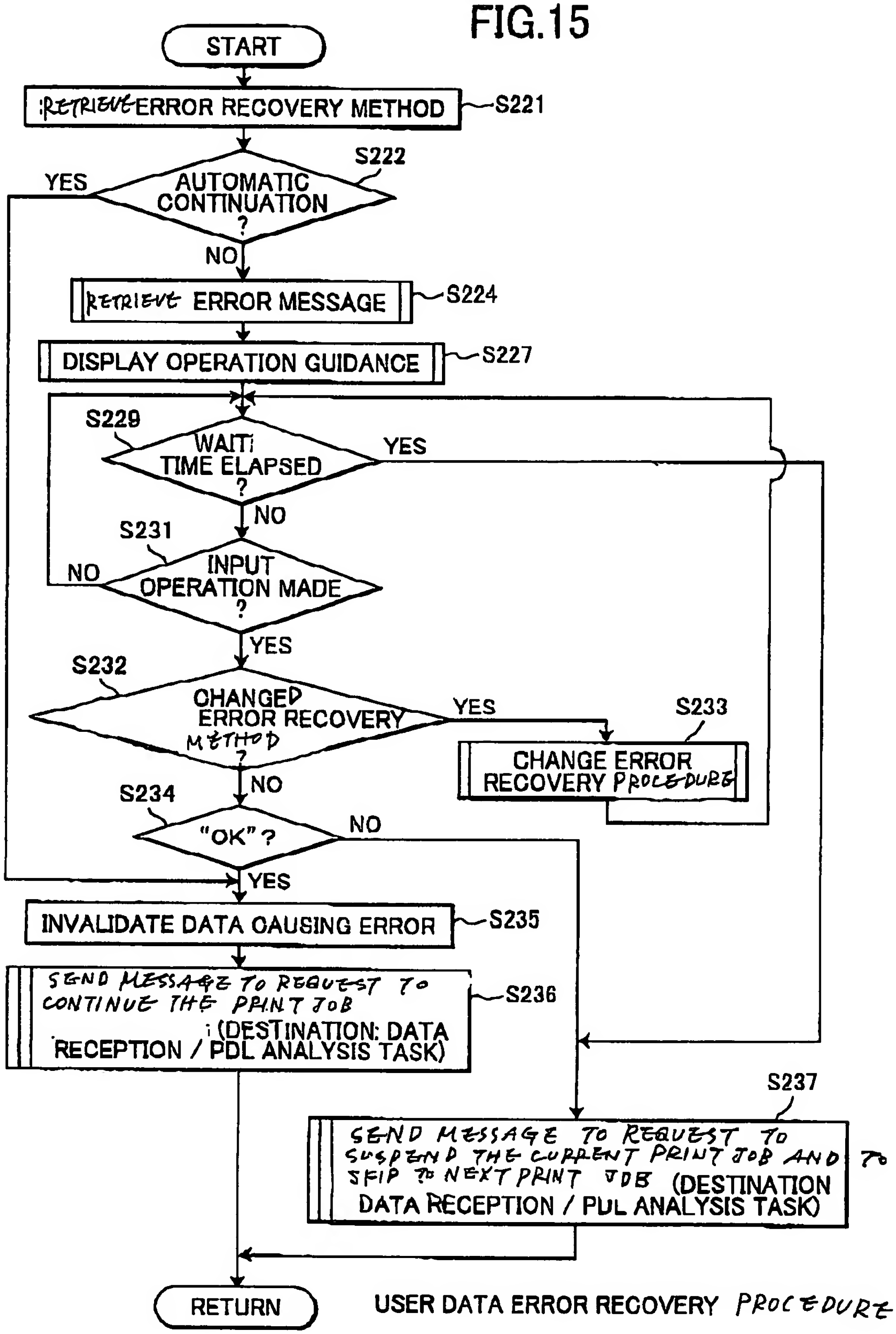
FONT SELECTION ERROR RECOVERY PROCEDURE

FIG.14


START
ERROR RECOVERY METHOD
S201
S202
AUTOMATIC CONTINUATION ?
YES
NO
ERROR MESSAGE
S204
DISPLAY OPERATION GUIDANCE
S207
S209
WAIT TIME ELAPSED ?
YES
NO
S211
INPUT OPERATION ?
NO
YES
S212
CHANGED ERROR RECOVERY METHOD ?
YES
S213
CHANGE ERROR RECOVERY PROCEDURE
NO
S214
"OK" ?
NO
YES
SPECIFY SIMPLEX PRINTING
S215
SEND MESSAGE TO REQUEST TO CONTINUE THE CURRENT JOB : (DESTINATION: DATA RECEPTION / PDL ANALYSIS TASK)
S216
S217
SEND MESSAGE TO REQUEST TO SUSPEND CURRENT JOB AND TO SKIP TO NEXT JOB (DESTINATION DATA RECEPTION / PDL ANALYSIS TASK)
RETURN

DEVICE CONFIGURATION MISMATCH ERROR RECOVERY PROCESS

FIG.15


START
RETRIEVE ERROR RECOVERY METHOD
S221
AUTOMATIC CONTINUATION ?
S222
YES
NO
RETRIEVE ERROR MESSAGE
S224
DISPLAY OPERATION GUIDANCE
S227
S229
WAIT TIME ELAPSED ?
YES
NO
S231
INPUT OPERATION MADE ?
NO
YES
S232
CHANGED ERROR RECOVERY METHOD ?
YES
S233
CHANGE ERROR RECOVERY PROCEDURE
NO
S234
"OK"?
NO
YES
INVALIDATE DATA CAUSING ERROR
S235
SEND MESSAGE TO REQUEST TO CONTINUE THE PRINT JOB (DESTINATION: DATA RECEPTION / PDL ANALYSIS TASK)
S236
S237
SEND MESSAGE TO REQUEST TO SUSPEND THE CURRENT PRINT JOB AND TO SKIP TO NEXT PRINT JOB (DESTINATION DATA RECEPTION / PDL ANALYSIS TASK)
RETURN

USER DATA ERROR RECOVERY PROCEDURE